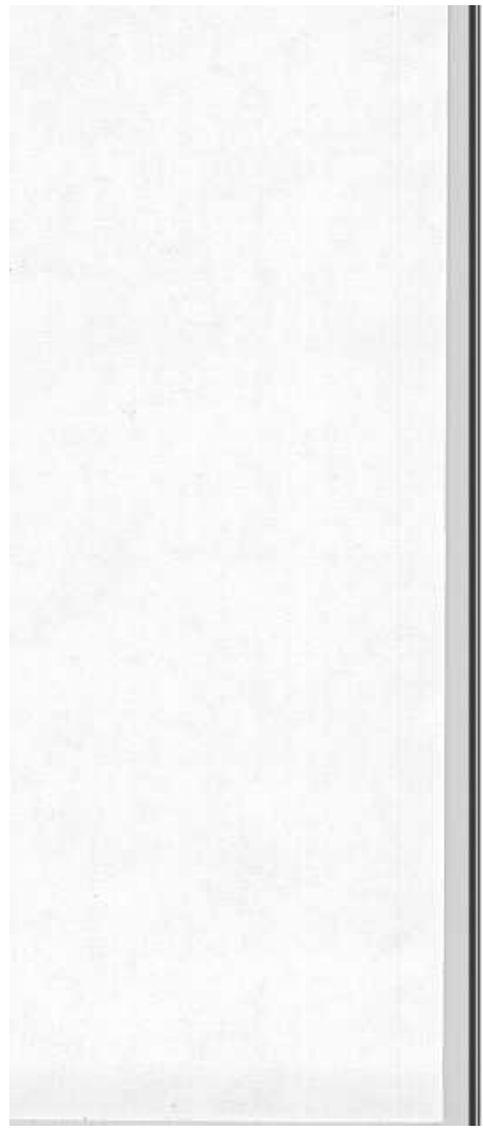
TAB 5



REPORT

Proposed Millennium Pipeline Local Waterfront Revitalization Plan/ Coastal Zone Management Program Evaluation

Village of Croton-on-Hudson,
New York

June 2001

O'BRIEN & GERE
ENGINEERS, INC.

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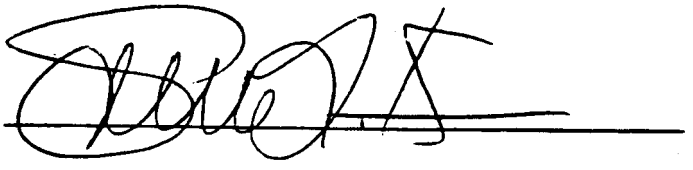

Swiatoslav W. Kaczmar, Ph.D., C.I.H.

June 2001

O'BRIEN & GERE
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Contents

I. INTRODUCTION

The following comments have been prepared on behalf of the Village of Croton-on-Hudson (the Village) for the purpose of assisting the New York State Department of State's (NYSDOS) review of the consistency of the Millennium Pipeline project with the policies of the state's Coastal Management Program (CMP) and the Village's Local Waterfront Revitalization Plan (LWRP). The Village's LWRP was created to implement the state's CMP and is intended to define the Village's goals and objectives with respect to the coastal zone. The LWRP defines the entire Village as being within the coastal zone and the state has accepted such definition.

II. CONSIDERATION OF THE GOALS AND OBJECTIVES OF THE LWRP/CMP

The Millennium Pipeline Co., L.P. (Millennium) plan for the construction of a natural gas pipeline has been prepared with little or no real consideration of basic policies for the protection of the coastal zone as codified in federal and state regulations and clearly stated and explained in the Village's LWRP. There are four major defects in Millennium's evaluation of the consistency of the pipeline with the CMP and the LWRP.

It is clear that Millennium's evaluation of pipeline route alternatives has not included the reasonable options for routes in the vicinity of the Village; in fact, it continues to review and seriously consider viable route options. Therefore, with reasonable options still under evaluation by Millennium and the Federal Energy Regulatory Commission (FERC), Millennium cannot claim to have minimized potential impacts on the coastal zone and its

resources. For example, Millennium's March 2001 consistency evaluation for the Route 9/9a Alternative, based upon which the New York State Department of State (NYSDOS) is being asked to make its consistency determination, is not the pipeline route that Millennium presently considers to be the preferred route. The present preferred route, known as the "ConEd Offset" Route, is not discussed in the March 2001 consistency evaluation. These comments also identify a new Route 117/Clarkstown Alternative which we consider to be the best option yet proposed for minimizing impacts to sensitive coastal zone resources; this option apparently has not been considered by Millennium at all. Therefore, in the absence of even a minimal review of the reasonable alternatives within the coastal zone, Millennium's consistency evaluation cannot be considered to be complete, let alone acceptable.

2. Millennium's evaluation of the crossing of the Hudson River at Haverstraw Bay is disingenuous at best, and is more self-serving than scientific. Its evaluation contains numerous unsubstantiated facts and conclusions, which are detailed in this report. Millennium's consistency determination fails to make use of and literally ignores without mention, 30 years of publicly available sediment, water quality and other ecological data which includes data covering the stretch of the Lower Hudson through Haverstraw Bay and the Tappan Zee. If these data do not apply to Millennium's evaluation, Millennium should have at least mentioned the reasons for the same in Millennium's documentation *somewhere*; the total omission of over 750,000 data points is indefensible. This obvious omission can only raise questions regarding the credibility of Millennium's methodology and, therefore, its conclusions with respect to the impacts of its proposed pipeline on to Haverstraw Bay and other natural resources of the coastal zone.

3 Millennium has continued to propose routes which approach from the west, loop north to cross the Hudson River at Haverstraw Bay, and then loop south to continue east. It is surprising that a technically issued comparative evaluation has not been presented of the impacts and costs of a route which travels more directly east from the approach route at about West Nyack, crosses the Hudson River at Route 17 or the Tappan Zee, and then travels eastward connecting with the proposed route which proceeds in that direction. Such a direct west-to-east route would appear to reduce construction miles, and eliminate impacts to many populated areas and environmental resources. This option is presented and discussed in greater detail herein.

4. The major impacts of the pipeline's construction have not been adequately reviewed. The gaps in the review process are obvious and have resulted in conclusions that are inaccurate and incorrect, if not directly biased. Millennium has disregarded project impacts to environmental resources, performed only superficial evaluations of sensitive resources, and apparently has not performed evaluations at all in some instances where major sources of existing data sit unused or ignored. This is especially true of the impacts to the Village's drinking water wells and aquifer. Millennium apparently did not obtain, review, or evaluate the most basic information available from the Village, based on the lack of any reference to the Village's engineering reports regarding its vital wellfield anywhere in Millennium's documentation. In addition, one of the primary objections of placement of the pipeline within the existing ConEd ROW was the potential safety issues associated with the construction and long-term presence of a gas pipeline near the transmission lines. ConEd is currently installing a gas pipeline within a portion of its ROW in Westchester County. The raising of the safety issues by ConEd relative to the proposed Millennium pipeline while constructing a gas pipeline of its own appears to be inconsistent, if not hypocritical.

III. IMPACTS TO HAVERSTRAW BAY

Both the 9/9A and ConEd Offset Routes propose to cross the Hudson River at Haverstraw Bay The LWRP contains explicit policies for fish and wildlife habitat protection with respect to Haverstraw Bay and the Croton River and Bay. These policies implement and expand the protection given these water bodies through their designation as Significant Coastal Fish and Wildlife Habitats. Millennium has disparaged this designation in its evaluations by characterizing Haverstraw Bay as similar to the Tappan Zee area, which has no such designation Millennium has criticized the appropriateness of this long-term designation rather than perform an adequate review of the project's impacts in consideration of this designation As a result, Millennium has not been able to demonstrate consistency with the Village as LWRP for the following reasons

1. **Major Sources of Hudson River Data Are Ignored** - There is a major omission in the evaluations by Millennium of the pipeline crossing options for the Hudson River. As a result, Millennium's evaluation of the consistency with the LWRP can not be adequately evaluated. This policy specifically requires the protection of Haverstraw Bay and Croton River and Bay habitat. Since the 1970s, the Hudson River water, sediments and biota have been the subject of one of the most intensive sample collection, analysis and evaluation programs in the world to address issues relating to PCBs in the environment. The New York State Department of Environmental Conservation (NYSDEC) has publicly available a database with over 750,000 data points, including sediment samples collected over an extended time period. The sample locations include the stretch of the lower Hudson that is the subject of the pipeline crossing evaluations.

The Hudson River polychlorinated biphenyl (PCB) issue is one which has received national press. The program proposed by the USEPA to address PCBs in the river sediments is highly controversial in the region and the state, and is a well known issue throughout the Northeast. Any program involving the river, including its sediments, water or biota, routinely includes active consideration of PCBs, the history of PCBs in the river, its potential impacts and implications to a project, and the data which has been generated. Therefore, it is startling that Millennium has not made reference to this history, to the data which is publicly available, and most particularly, the sediment data in the lower Hudson, specifically the available data which indicates the presence of PCBs within the stretch of the river from the north of Haverstraw Bay south to the Tappan Zee Bridge (the project area). The sediment data should have been an integral part of Millennium's impact evaluations, and other data from these studies considered for implications to coastal zone and other resources.

The complete omission of these publicly available and directly applicable PCB data by Millennium represents a gross oversight which on its own justifies a complete reconsideration of the pipeline crossing of the Hudson, the appropriateness of the engineering methodology for the crossing, the implications and impacts to the aquatic ecosystem, the appropriateness of the NYSDEC's 401 Water Quality Certification, and the credibility of Millennium's LWRP consistency evaluation. The few sediment samples collected and analyzed by Millennium can only be evaluated in the light of the larger and more accurate database of the NYSDEC. In addition, considering that the critical nature of PCBs in the evaluation of project impacts to the aquatic environment, more detail is necessary regarding the few sediment samples collected and analyzed by Millennium, including the manner in which they were collected, the depth in the sediment column, the analytical procedure including the Aroclor(s) to which the analyses were compared, the analytical detection limits, whether congener specific analyses were performed,

and the specific analytical results (the statements "not detected" or "below analytical detection limits" can be misleading without knowledge of the detection limits).

The omission of any discussion of the publicity available data or explanation of the analytical methods Millennium used in conducting its own sediment contaminant analyses becomes even more suspect when considered in light of the actual results of this past sampling, which appear to completely contradict Millennium's findings. Specifically, early studies reported concentrations of PCBs in sediments ranging from over 1,000 parts per million (ppm) in the upper Hudson River to 8 ppm in the New York Harbor area (Bopp). The USEPA's ecological risk reassessment reported average PCB concentrations in sediments as 1.537 mg/kg at mile point 47.3 (TAMS, 2000). Mile point 47.3, as measured from the southern end of Manhattan, is approximately 10 miles upstream of the Haverstraw Bay area. Recent data collected as part of Phase 3 of the USEPA's ecological reassessment investigations reported sediment concentrations of PCBs approximately 10 miles downstream of Haverstraw Bay ranging from 0.49 to at 0.15 mg/kg (NYSDEC, 2001).

2. **Sources of River Water Quality Data Have Been Ignored** - In addition, the STORET system contains water quality data from analysis of water column samples from the Hudson River and other rivers in the region. These data provide a baseline of water quality and should be compared to the data from samples collected by Millennium to evaluate whether the samples were representative of river conditions. In addition, these data provide a richer database to which monitoring data should be compared so that the impacts to water quality of a Hudson River or Croton River crossing can be more accurately evaluated.

3. **Section 401 Water Quality Certification, Hudson River Crossing Route 9/9a, Construction Period** – Millennium has estimated a period of 2.5 months (approximately 75 days) for completion of the construction of the Hudson River stretch of the pipeline. The NYSDEC's Section 401 Water Quality Certification requires that "All Hudson River crossing construction shall be conducted within the 92 day construction window of July until September 31." This time frame is not in concert with the construction window proposed by FERC of August through October 31. Additionally, the NMFS recommends a construction window of September to November 15. It is likely each agency has differing opinions on when construction should occur due to the variety of construction-related impacts and the life stages of fish fauna inhabiting the river at the respective times. We are aware that meetings have been held among the various involved federal agencies. The FERC should present information concerning the agreement, if any, between the referenced agencies of when construction should begin and end, and how many total days of construction window exist for the selected crossing of the Hudson River. The report "An Atlas of the Biologic Resources of the Hudson Estuary" concludes that physical alterations made in the estuary during December, January, and February would have the least effect of biota, except at overwintering sites. Physical alterations are not desirable in the Hudson River in the spring, summer, and fall because during the spring most estuarine biota reproduce, while during the summer and fall there is an abundance of immature stages of oceanic species that move into the estuary. As for the winter months, Haverstraw Bay is used as a wintering area by the shortnose sturgeon. Therefore, within Haverstraw Bay there is no desirable time period to make physical alterations. The estuary and the mid-stretch of the Hudson River are complex systems involving spawning and migration of a number of notable aquatic species. Millennium has noted these factors, and then ignored their importance.

This schedule limitation leaves little flexibility for Millennium in the event of construction delays due to weather or other issues. Millennium has not provided information as to back-up

oxygen in the water column have only been peripherally noted and need to receive attention by Millennium.

Specific references and or substantiating data should be presented within the discussion of impacts to benthic and pelagic fauna of the river in the area of the crossing. For example, it is stated that suspended solids will "cease after construction;" however, based on natural factors including weather, wind and the effect of the tides, solids could remain suspended for significant time periods, displacing or otherwise impacting resident fauna for extended periods. Millennium appears to have posited only ideal dispersion conditions and does not appear to have evaluated this issue.

The bioaccumulation of PCBs through the food chain is a significant issue with regard to ecological impacts of contaminated sediments. PCBs are present in the sediments of the Hudson River and will be dispersed with the dispersion of the river bottom sediments during the construction of the Hudson River crossing. According to Millennium's own modeling, sediments will be dispersed downriver, carrying PCBs with them. The effects of contaminants on planktonic organisms is strongly influenced by the suspension or resuspension of sediments (Findlay, 1991). Planktonic organisms are near the lower end of the food chain. As these organisms are ingested by organisms higher in the food chain (*i.e.*, benthos, small fish species, larger fish species, birds of prey, mammals, and, ultimately, humans) the bioconcentration of PCBs increases in tissue.

The USEPA reassessment of the ecological risk associated with the contaminated sediments in the Hudson River indicates that the concentrations found generally exceed the levels that have been found to have resulted in adverse effects on birds of prey and mammals which feed on fish or other aquatic species (TAMS, 2000). In particular, birds of prey such as the belted kingfisher

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